Supplement

to the

Kenai Peninsula Invasive Plant Treatment Project Environmental Assessment of 2014

Seward and Glacier Ranger Districts, Chugach National Forest, Alaska

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Introduction and Background

The Kenai Peninsula Invasive Plant Treatment Project began in May 2014 with approval to eradicate, control, or contain non-native invasive plants within the Chugach National Forest on the Kenai Peninsula Zone (KPZ). Since its' inception, more non-native invasive plant infestations have been found yearly, some have spread and others have been contained or eradicated. While the program has generally been successful in achieving its' goals, time has shown that changed conditions and new information now require a reassessment to determine if the Environmental Analysis (EA) needs to be corrected, revised or supplemented to allow for effective treatment of infestations.

Forest Service policy at FSH 1909.15 §18 direct us to periodically review environmental documentation of on-going projects to determine if correction, supplementation, or revision is needed. New information or changed conditions found during such reviews may lead to reconsideration of the original decision.

In order to respond to changed conditions and new information, we are proposing to supplement the 2014 decision to allow greater flexibility in treatment options and to create a unified approach to invasive plant management across the Forest.

This analysis incorporates by reference the Prince William Sound Zone Terrestrial Invasive Plant Treatment Project EA from 2017. This project implements the Chugach National Forest Land Management Plan and is subject to 36 CFR 218, Subparts A and B.

Proposed Action and Purpose and Need

The original need of the EA remains the same; "to reduce the extent of specific invasive plant infestations, provide a mechanism to allow rapid response to newly emerging invasive plant infestations and to help protect uninfested areas from future introduction and spread of invasive plants". It proposes to achieve this through "control and eradication of known invasive plant infestations and the treatment of new infestations in an efficient and cost-effective manner that complies with environmental standards" (USDA 2014). To reach these goals, flexibility in implementation methods is critical. This supplemental EA addresses four invasive plant treatment modifications that will make the KPZ EA consistent with the Prince William Sound Zone's (PWSZ) EA and afford greater flexibility in our treatment options.

Proposed Treatment Modifications

1. **Add five new herbicides**: **Triclopyr, Clopyralid, Sulfometuron Methyl, Imazapyr, and 2,4-D**
    - The effects of these five herbicides were analyzed in the PWSZ EA and are in use on the PWSZ.

    - The 2014 KPZ decision allows the use of two herbicides, Glyphosate and Aminopyralid. Repeated use of herbicides from the same family leads to resistance in invasive plants and makes them much harder to control or eradicate. The addition of these five herbicides would greatly expand our ability to implement effective treatments now and into the future.

2. **Remove self-imposed buffers and follow herbicide label direction instead**
    - The 2014 KPZ decision includes a design criteria that limits use of herbicide to a 15 to 100 foot buffer (depending on the product being used) of surface water. However, herbicide label direction states the products may be used to the water line.

- New infestations of highly invasive reed canarygrass have been found on the banks of the Russian River. Mechanical and cultural control means have not been successful with this species. The Kenai Peninsula Cooperative Weed Management Area Strategic Plan lists eradication as the treatment action for the Russian River. Removing the buffers in the original EA and following label direction would allow us greater flexibility in treatment options, to be a significant partner in this cooperative effort, and to rapidly respond to any new infestations found near water.

3. **Add use of ATV/truck mounted sprayers**
    - The 2014 KPZ decision allows the use of small handheld or backpack sprayers.

    - Since the 2014 decision was signed, invasive infestations have been found that require treatment beyond the capacity of backpack sprayers (e.g. powerline corridors). Authorizing these motorized means of herbicide spraying would allow us to treat large areas efficiently and at a lower cost.

4. **Allow treatment of new infestations greater than 1 acre**
    - The 2014 KPZ decision requires a separate analysis if a new infestation larger than one acre is identified. It also states that "Early detection and rapid response are critical components of an effective invasive species management program". At the time the 2014 EA was prepared it was thought that new infestations would be small. We've learned that by the time we detect new infestations they can be larger in size. Removing this new infestation size treatment requirement would allow us to treat new infestations in a timely manner before they have an opportunity to expand even further.

Changes to project design criteria for the 2014 Environmental Assessment

The following two design criteria from the original 2014 EA would become void:

- Herbicides will be applied from hand carried or backpack equipment. Target species will be spot treated with hand-held applicators.

- No spraying will occur within 100-feet of surface water when using terrestrial formulation of glyphosate herbicide (potentially with POEA surfactant). An aquatic formulation of glyphosate would be used up to 25 of surface water. Although an aquatic formulation is labeled safe to use around water, the 25-foot buffer has been added as an extra layer of caution. The aminopyralid herbicide can be applied up to 15-feet of surface water body. Label restrictions for aminopyralid state that this herbicide can be used to water's edge, however, the extra 15-foot buffer has been included as an added layer of caution. Surface water includes flowing streams, wetlands, wet meadows and standing bodies of water.

The following design criteria, adopted from the PWSZ EA, will be added:

- Herbicides will generally be applied from hand-carried or backpack equipment and target species will be spot treated with hand-held applicators. ATV or truck-mounted spray rigs may be needed and utilized on lands appropriate to use of motorized vehicles (roads, motorized trails, open motorized areas).

- Spraying will not occur over surface water bodies or below mean high tidelines. Near surface water, application will begin nearest to the water's edge and will progress away from the surface water body.
- Use only aquatic formulations or low aquatic risk herbicides on saturated soils, those with seasonally high water tables, or wetlands where label restrictions allow. Land types in treatment areas identified as having a high water table during parts of or all of the year would be field-checked; treatment methods would be modified based on ground conditions.
- Only formulations approved for aquatic use will be used within 150 feet of surface water, wetlands, or on roadside treatment areas having a high potential to deliver herbicide to aquatic environments.
- Treatments of large monocultures that leave bare soil will be revegetated. Revegetation will follow current Chugach standards for seed mix, or use native seed if available.
- Herbicide 2,4-D will only be used on high priority infestations that are determined by the District's invasive plant specialist to be resistant to other families of herbicides included in the proposed action.
- Soil type will be determined prior to treatment and aminopyralid, imazapyr, or clopyralid will be avoided on high porosity (coarse-textured) soils, particularly where the water table is shallow. Exceptions include heavily compacted sites located on artificially constructed road and dam structures.
- No more than one application of sulfometuron methyl would occur on a given area in a calendar year, except to treat areas missed during the initial application.
- Spot herbicide applications will not exceed application rates for the following herbicide:
  - Sulfometuron methyl will not exceed 0.2 lb a.i./ac.
- Herbicide application will not exceed application rates for the following herbicides:
  - Sulfometuron methyl at any rate higher than 0.12 lb a.i. /acre.

Scope

The scope of this proposal is to determine whether to supplement the May 2014 decision to allow the modifications stated in the above proposed action. Other actions and design criteria found within the original Kenai Peninsula Invasive Plant Treatment Project not subject to the proposed modifications would remain in place. This supplemental EA will analyze the effects of using Triclopyr, Clopyralid, Sulfometuron Methyl, Imazapyr and 2,4-D that may be different than those analyzed in 2014. It will also determine the effects of strictly adhering to herbicide label direction, the use of motorized herbicide applicators, and treating new infestations greater than one acre without a prior separate analysis.

Public Involvement

The 2014 KPZ and 2017 PWSZ Invasive Plant Treatment EAs received a total of eight generally supportive comments from both public and agency respondents. Issues from comments included effects to fish and wildlife, unnecessarily prohibitive design criteria and the use of 2,4-D. These issues were analyzed and factored into the decision.

Other agencies and groups that are interested in the management of invasive plant species on the Kenai Peninsula, including the National Park Service, US Fish and Wildlife Service, Kenai Peninsula Borough and the Kenai Peninsula Cooperative Weed Management Area, were contacted to obtain input on the changes proposed in this supplemental EA.

Issues

This supplemental EA will make the KPZ decision consistent with the PWSZ decision. All of the proposed changes included in this supplemental EA were analyzed in the PWSZ EA. Specialists conducting this analysis reviewed the analyses for their respective resource areas in the PWSZ EA, resource reports, public comments and referenced risk assessments. The PWSZ EA and decision, including design features and mitigations, sufficiently addresses any potential effects as they would relate to the proposals in this supplemental EA. No issues or unresolved conflicts were identified that would require further analysis or consideration of any additional alternatives.

Existing Condition of Affected Environment

This section discusses the change in conditions and new information available since the original EA was prepared. Other conditions not discussed did not change from the original EA. This section establishes the context in which effects from the additional treatments (disclosed in the following Environmental Consequences section) are evaluated.

The desired forest condition is to manage invasive plants in a manner to prevent adverse impacts to natural resource values while minimizing adverse impacts of management efforts.

When the Kenai Peninsula Invasive Plant Treatment Project was initiated, the rate of spread of invasive plants on the Forest was expected to increase in response to increased human development and use, climate change, insect infestations and fire. Since, invasive plant species have generally remained in areas of intensive human-caused disturbances such as road edges, visitor facilities, trailheads, mineral material sites and trails with humans being the primary vector.

More and larger infestations of highly invasive plants such bird vetch, white sweet clover and reed canarygrass have appeared and spread. While Forest Service and partner group personnel endeavor to locate and treat these populations at an early stage, some have become large and pose serious threats to native plant communities. Less invasive non-native species have spread in the backcountry but remain along trails and at cabin sites.

Environmental Consequences

The analysis incorporated the herbicide risk assessments displayed in Table 1 to evaluate the potential for harm to human health, non-target plants, wildlife, and aquatic organisms from the additional herbicides considered for use in the proposed action. The referenced risk assessments considered worst-case scenarios, including accidental exposures and application at maximum label rates.

Table 1. Risk Assessments for proposed additional herbicides.

Herbicide	Date Final	Risk Assessment Reference
Clopyralid	Dec. 5, 2004	SERA 2004a.
Imazapyr	Dec. 16, 2011	SERA 2011.
Sulfometuron Methyl	Dec. 14, 2004	SERA 2004c.
Triclopyr	May 24, 2011	SERA 2011b.
2,4-D	Sept. 30, 2006	USDA 2006

In addition to combating resistance in invasive species, including a variety of herbicides also increases the flexibility of treatment timing, as some herbicides are more effective at different stages during a plants

life cycle than others, and would therefore result in use of the lowest amount of herbicide needed to be effective. This improved flexibility would not create cumulative additional risk when combined with past, present, and reasonably foreseeable future activities because despite a suspected insignificant increase the first year, overall amounts of herbicide used each year would remain stable at current levels or decline and the chemicals chosen are deemed safe by the EPA.

Buffers to spraying were included in the original EA as an extra layer of caution. The proposed herbicides are all registered with the EPA and the State of Alaska and have strict requirements and recommendations in the label direction stating where they can safely be applied. This direction paired with the findings of risk assessments lead to design criteria that effectively minimize the threat to the affected environment.

Design criteria to be adopted also address the potential effects of using truck/ATV mounted sprayers and treating larger infestations without separate analysis.

Conclusions

Kenai Peninsula Zone specialists reviewed all available information pertaining to the proposed action in January 2020. After reviewing the PWSZ EA, risk assessments, specialist reports and public comments, KPZ specialists found no environmental consequences that required further analysis or needed design criteria that were not proposed to be adopted into the KPZ EA.

The proposed changes to the 2014 EA would initially result in a small increase in annual herbicide use as sites within the current buffer zones were treated. This increase would be tempered by applying lower doses of the active ingredient found in the additional herbicides compared to those allowed now. As these and other sites outside of the buffer zones were more effectively treated due to greater timing flexibility and lower doses of active ingredient, annual herbicide usage would decrease.

A reduction in the amount of active ingredient needed to control and eradicate invasive species on the KPZ would reduce the chance of exposure to workers and the public. Regardless of a reduction in herbicide usage, workers would continue to be more likely than the public to be exposed to herbicides when engaged in application activities. The public could still be exposed to herbicide if they eat contaminated fish, berries, or mushrooms, etc. Non-target, native berries or mushrooms may be affected by drift or runoff. Several exposure scenarios for recreational and subsistence fish consumption were considered in the SERA Risk Assessments; none are near any herbicide threshold of concern. Fish contamination is unlikely given the project design criteria that reduce potential herbicide delivery to water (USDA 2017).

Instituting the proposed changes to the 2014 Kenai Peninsula Invasive Plant Treatment Project will not significantly change direct, indirect or cumulative effects since annual treatments will be about the same. The effects of clopyralid, imazapyr, sulfometuron methyl, triclopyr and 2,4-D are not substantially different than the herbicide effects analyzed for the original projects and generally less herbicide would be used due to greater efficacy. Potential adverse effects of removing buffers, using motorized spray equipment and treating areas greater than 1 acre are mitigated through design criteria. All of these activities have been analyzed by specialists in both the Kenai Peninsula and Prince William Sounds Zones and no significant impacts were found.

As stated in the original Decision Notice, the focus of the proposed action is to control or eradicate known invasive plant infestations and treat new infestations in a way that protects resources, meets the purpose and need and does not conduct management activities above and beyond what is needed to meet those goals (USDA 2014b).

How to comment on this project

Comments can be sent to: Seward Ranger District, Attn: Kenai Peninsula Invasive Plant Treatment Project Supplemental EA, 33599 Ranger Station Spur, Seward, AK 99664; by FAX at (907) 288-2000; by email in a format compatible with Microsoft Office applications (pdf, txt, rft, or docx) to daniel.mico@usda.gov; or you may hand deliver your comments to the Seward Ranger District Office (33599 Ranger Station Spur, Seward, AK 99664) during normal business hours from 8 a.m. to 4:30 p.m., Monday through Friday, excluding federal holidays. Please note, in order to continue to be included in this process, e-mail submissions must contain a deliverable mailing address. Specific written comments on the proposed project will be accepted for 30 days following the date notice is published in the Anchorage Daily News. This will be the only time to comment on the project as the scoping and comment periods have been combined.

I encourage you to contact Dan Mico at (907) 288-7703 with questions you may have regarding the project. You must respond to this invitation in order to be placed on the public involvement list for this project and to receive any further project notifications. Project details are also available on the Forests website at: https://www.fs.usda.gov/project/?project=57561.

All comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on this proposed action and will be available for public inspection.

References

Syracuse Environmental Research Associates (SERA). 2011b. Triclopyr – human health and ecological risk assessment – final report. SERA TR 052-25-03a.

Syracuse Environmental Research Associates (SERA). 2004a. Clopyralid – human health and ecological risk assessment – final report. SERA TR 4-43-17-03c.

Syracuse Environmental Research Associates (SERA). 2011. Imazapyr – human health and ecological risk assessment – final report. SERA TR 052-29-03a.

Syracuse Environmental Research Associates (SERA). 2004c. Sulfometuron methyl - Human Health and Ecological Risk Assessment Final Report. SERA TR 03-43-17-02c.

USDA Forest Service. 2006. 2,4-D Human Health and Ecological Risk Assessment- Final Report. Forest Health Protection Service, Arlington, VA.

USDA Forest Service. 2014. Environmental Assessment – Kenai Peninsula Invasive Plant Treatment Project. March 2014. https://www.fs.usda.gov/nfs/11558/www/nepa/81361_FSPLT3_1637872.pdf

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USDA Forest Service. 2017. Environmental Assessment – Prince William Sound Zone Invasive Plant Treatment Project. October 2017. https://www.fs.usda.gov/nfs/11558/www/nepa/105624_FSPLT3_4092376.pdf